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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,259	12/27/2000	Yuji Aburakawa	201222US2	4738
22850	7590	10/04/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.				BELLO, AGUSTIN
1940 DUKE STREET				
ALEXANDRIA, VA 22314				
ART UNIT		PAPER NUMBER		
		2633		

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/748,259	ABURAKAWA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Agustin Bello	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 02 August 2004.

2a) This action is FINAL.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1 and 11-18 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1 and 11-18 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/2/04 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sonetaka (U.S. Patent No. 6,487,392) in view of Karasawa (U.S. Patent No. 5,493,436).

Regarding claims 1, 14, and 18, Sonetaka teaches a central control station (reference numeral 2 in Figure 1) provided in a mobile communication system which includes a plurality of radio base stations (reference numeral 3 in Figure 1), the central control station for controlling the radio base stations connected thereto and an upper-level station (reference numeral 1 in Figure 1) connected to the central control station, comprising: radio signal transmitting and receiving units (reference numeral 201, 301 in Figure 1) and optical signal transmitting and receiving units (reference numeral 202 in Figure 1) which transmit and receive signals via radio links or optical fiber links that are provided for connection with the base stations; and a

distribution unit which is provided between said signal conversion units and units of said radio signal transmitting and receiving units and said optical signal transmitting and receiving units, and provides a communication connection for sending the converted signals having the common transmission format between a predetermined one of the base stations and the upperlevel station (inherent in the distribution of either optical and radio signals from control station 2 to Base stations 3). Sonetaka differs from the claimed invention in that Sonetaka fails to specifically teach the inner workings of the central controller which would include a demultiplexing unit which demultiplexes a signal supplied from the upper-level station to generate a plurality of sequences of signals, and multiplexes a plurality of sequences of signals received from the base stations into a single signal for transmission to the upper level station; signal conversion units which are coupled to said demultiplexing unit and convert the respective demultiplexed sequences of signals into converted signals having a unified transmission format. However, the use of a demultiplexing unit and signal conversion units within a central control station is well known in the art. Karasawa, in the same field of endeavor, teaches the inner workings of a central control station and therefore that it is well known in the art to demultiplex a signal (reference numeral 1 in Figure 4) supplied from an upper-level station and convert the respective signals (reference numeral S0 in Figure 4) into signals having a common transmission format (reference numeral S1 in Figure 4) enabling compatibility between radio links and optical fiber links (e.g. the signal format of Karasawa is compatible with both radio links and optical links in that it is converted to electrical radio signal S1, then converted to optical signal S2, sent over a fiber, then converted back to a radio signal for transmission by radio transmitter). One skilled in the art would have been motivated to demultiplex the signals received from an upper-level

station and convert the respective signals to a unified format in order to distribute the demultiplexed signals to a plurality of base station independent of the transmission medium and to do so in a signal format compatible with the base stations. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to demultiplex a signal supplied from an upper-level station and convert the respective signals into signals having a unified transmission format.

Regarding claims 11 and 15, the combination of references and Karasawa in particular teaches said signal conversion units include a modulation/demodulation unit (reference numeral 2 in Figure 4).

Regarding claims 12 and 16, the combination of references teaches that said signal conversion units include a modulation/demodulation unit (reference numeral 2 in Figure 4) and a radio frequency conversion unit (inherent in that the central control station transmits a signal via a radio frequency via antenna 201 in Figure 1 in Sonetaka).

Regarding claim 13 and 17, the combination of references and Sonetaka in particular teaches that said signal conversion units include a base-band modulation/demodulation unit (column 2 lines 30-39 in Sonetaka).

#### *Response to Arguments*

4. Applicant's arguments filed 1/6/04 and 8/2/04 have been fully considered but they are not persuasive.
5. In response to applicant's argument that the prior art fails to teach a distribution unit, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed

invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In this case, it is clear that a distribution unit sending signals having a unified transmission format is used in the system of Sonetaka in that both radio and optical signals are distributed to the base stations.

6. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case the combination of references would have suggested that the central control taught by Sonetaka could be comprised of the inner workings taught by Karasawa.

7. The applicant argues that Karasawa fails to specifically teach a common transmission format. However, the examiner disagrees. As noted in the updated rejection, it is clear that Karasawa teaches a common format which is compatible with both radio and optical transmission links in that the signal is converted to electrical radio signal S1, then converted to optical signal S2, sent over a fiber, then converted back to a radio signal for transmission by radio transmitter. Clearly, whatever format Karasawa has chosen to use, it is common between and compatible with both radio and optical links. Going a step further, the broadest reasonable interpretation of "common" reinforces that Karasawa teaches a common transmission format in that all signals S0 are converted to common signal S1 and common signal S1 is converted to common signal S2. They are common in that they are all the same and are shared in branches

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prior to conversion to S2. Furthermore, the signals in Karasawa are compatible with the radio links and optical links in system. After reviewing the references, the examiner has determined that they continue to read on the claimed invention.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Driessen, Tang, Imajo, Hamilton-Piercy, Koonen, Darcie, and Sasai teach relevant art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Agustin Bello  
Examiner  
Art Unit 2633

AB

  
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